

SPOTLIGHT ON THE CUSTOMER

DCMA'S INTEGRAL ROLE IN SUPPORTING



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CUSTOMER FOCUS

The Future Combat System (FCS) is one of the Army's largest programs and one in which DCMA plays a substantial role. To learn more about the program and the support DCMA provides, we spoke with Army Brig. Gen. Charles A. Cartwright, program manager, Unit of Action, Future Combat System Program Office. Brig. Gen. Cartwright has served as program manager since May 2004 and has been nominated by the president for promotion to major general.

(Background) FCS vehicles, from left: Reconnaissance and Surveillance Vehicle (RSV), Non-Line-of-Sight Cannon (NLOS-C) and Mounted Combat System (MCS). (Image courtesy of U.S. Army)

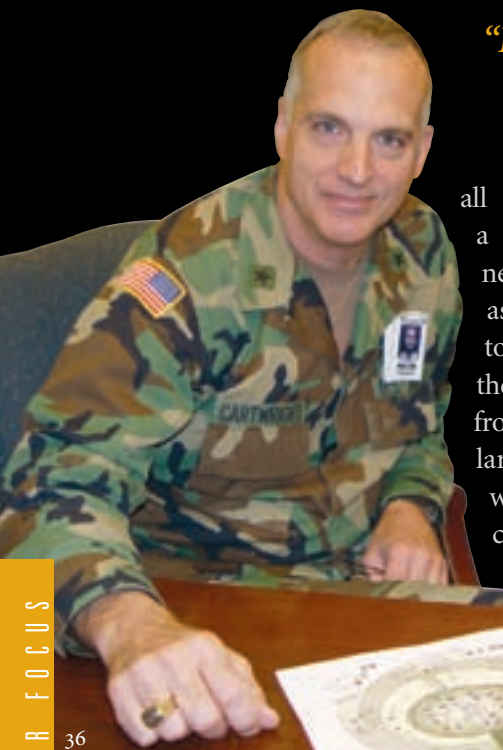
FUTURE COMBAT SYSTEMS

Q: Can you give me a brief overview of the Future Combat System and its importance to the Army's transformation?

BGC: We're building a Unit of Action with 18 units. Once the nineteenth is added, we call it "18 plus one plus one." The first "plus one" stands for the network and the second "plus one" stands for the soldier. The world is used to Congress, OSD [Office of the Secretary of Defense] and contractors working on single contracts to build a single platform — this was about building a team. As we go to this network-centric warfare, every platform we build includes a missile interior with a radio inserted, and that radio is tied to the network. [For example], if we need to change

the missile in flight ... we can do that. This is more about horizontally building something as opposed to vertically.

The Army has directed the FCS team to focus on developing future technologies as well as spiraling out those previously developed technologies to current forces — battle command software, a manned ground vehicle, unmanned ground vehicle, robot, Bradlees, the whole force structure. Some products become available in a shorter time than others because of complexity level, but instead of waiting until the Army can get that equipment we had to figure out how to spiral out. By 2014, you should see the first complete FCS Unit of Action with



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all 18 platforms plus one and a complete battle command network. About the same time as we received the directive to spiral out technologies, the Army began reorganizing from being division-based, with larger unit headquarters, to what we call “modular brigade combat teams.” Under the division-based concept, you organized your whole station one way — Bradley units grouped together in one place, Abrams units together somewhere else, aviation units grouped

together elsewhere. With brigade combat teams, those units are all together and in the same place in both peacetime and wartime. They may have different equipment, but they’re all the same structure across the United States Army. The intelligence specialists, maintainers, aviation units, etc. are all part of this organic unit. You train this way, you fight this way and you live this way, and it’s all based off the FCS organizational design.

DCMA is organized so that it supports the platform PMs [program managers]. If you look at our 18 systems — ground, aviation, robotics, missile, C4ISR [Command, Control, Communication, Computer, Intelligence, Surveillance and Reconnaissance] — you can very quickly see we fall across all of General Scott’s DCMA reorganization. We kind of ended up leading the way for General Scott in how we were designed and organized in the new concept he’s going to.

Q: Tell me about the “One Team” management approach for FCS and the role DCMA plays on the team.

BGC: The One Team partners involve every major Defense contractor on this program, and I look at DCMA as another partner. My first look into the network we’re building is the One Team partners and their integration labs across the United States. There’s an intensive effort to tie all these integration labs together so that as they do their development work, we can be online in design and software and hardware builds. This incorporates not only the One Team partners below us, but the others horizontally across the program.

“DCMA is part of the intellectual process of, ‘How do you solve that?’”

We work in what we call the Advanced Collaborative Environment [ACE]. Every Tuesday Dennis [Muilenburg, Boeing vice president and FCS program manager] and I hold our meetings with all the One Team partners, all the IPTs [integrated product teams] across the country and DCMA. Usually we dial in about 148 stations across the United States and go through our program in a very standard metric format. The design, everything, is all done through a collaborative environment.

Q: Do you see DCMA’s role evolving as FCS transitions from an Other Transaction Agreement (OTA) to a traditional Federal Acquisition Regulation (FAR) based contract?

BGC: When the Army first decided to go with an LSI [lead systems integrator] approach, Lt. Gen. Yacovac (then Maj. Gen. Yakovac) approached Gen. Harrington and said, “We need DCMA’s role integrated into this program, rather than the standard ‘I-send-you-a-report-every-week’

(Above) Army Brig. Gen. Charles A. Cartwright, program manager, Unit of Action, Future Combat System Program Office, in his office at the Pentagon. (DCMA staff photo)

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[role]. We need DCMA to have an integrated decision-making role." Usually we have one DCMA commander, and he or she's the one I go to to receive a standard report. For this, because we're reorganizing and had to figure out a different way of doing business, we wanted something different. We wanted DCMA's assimilation into the program. DCMA's decision-making role is an integral piece to the One Team partners across the United States.

Notice I said "decision-making." There's always the oversight [role], but now DCMA's part of the decision-making process as we build requirements, components and hardware. DCMA came forward with a process where there would be the regional West [employee] as the single point across DCMA, and then the DCMA [employees] in St. Louis would be the lead integrators to help pull together all the DCMA agencies across the country. If I remember correctly, we're currently staffing 134 full-time folks from DCMA across the country who are necessary to this program. DCMA's reports are part of the decision-making process. Matt Danter [DCMA Boeing St. Louis] and Col. Weber [DCMA Boeing St. Louis] are just as essential as Dennis Muilenburg, the Boeing lead on this program. In terms of evolving from an OTA to a FAR, DCMA is actually providing a lot of assistance, really good help and advice on how to go from an OTA to a FAR without stopping and without spending a lot of dollars doing re-proposals.

Q: What challenges does the new lead system integrator (LSI) concept present to you as program manager?

BGC: The first [challenge] is that all of our organizations are set up for building single platforms. To create this Unit of Action, that's a

completely different cultural shift [and] change in the way we do business. That's what we really put this LSI in the role to do. How do we build this, how do we integrate, how do we optimize requirements based on, say, the KPPs [key performance parameters] at the top level, not down at each platform level? Because you're part of a great network — the network is the number one priority, and the platform requirements are being built *around* that network.

The second thing: every day, One Team partners are forming teams to compete on contracts across OSD. One day it may be contractor A and B [competing] on one contract, and the next day it may be B and C. When you have every major contractor on this program sharing data and building this real-time, protecting the integrity of somebody's knowledge, which is really the key to building systems today, is a challenge. The intellectual knowledge that a company has is its real value, because engineers go and come from a program. So how do you, with every major contractor on this program building air platforms, ground platforms, robotics and missiles, share that data but keep the integrity of their intellectual property rights as we go along this program at the speed necessary?

To give you an idea, we're close to [spending] \$10 million a day, so the speed of decision making is the third [challenge] on this program. Dennis [Muilenburg] and I have a rule: from the time that you identify an issue or challenge or something that needs a decision, you've got nine days — that's our metric. Think

about it: that's already \$90 million, though that doesn't say that

(Right) The FCS Non-Line-of-Sight Cannon provides networked, extended-range targeting and rapid and responsive fire in support of FCS Combined Arms Battalions. It can start and stop quickly, rapidly rearm and refuel, and its system weight makes it uniquely deployable. (Image courtesy of U.S. Army)



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the \$90 million is tied to that decision. We have 23 of these One Team partners across the program, and we're asking the LSI to make very, very good systems engineering controls and decisions, with all the facts, within a metric of nine days. Because [otherwise] what happens is large bureaucracies are created and then boards, panels and studies, and you'll continuously study this [issue] and never make a decision. We've asked this LSI to get out of the normal decision-making consensus that takes forever. I want a decision made in nine days and published across the complete One Team.

Q: Is DCMA meeting your needs and expectations and providing good customer service?

BGC: DCMA is an indispensable and a valued piece of the decision-making process. Being able to get stuff designed, developed, tested and fielded is what it's all about. All DCMA's folks who work with all these contractors daily know their strengths and weaknesses and are an essential piece of the IPTs, helping them gain the knowledge to make a decision by [figuring out] the challenges and issues that they're facing and how to work through them. It's not, "OK, you've got this problem, now go solve it." DCMA is part of the intellectual process of, "How do you solve that?" Don't just give me a problem; help me solve it and [figure out] how we need to do it. So when someone says,

"OK, now give me a metric to that," that piece is DCMA.

Q: What do you see that causes you concern in the near future? How will you look to DCMA to help you ease these concerns?

BGC: As we go from building requirements and requirements slowdowns to starting the design and development of equipment, the real hard decisions come because now we're facing the challenges of "Which path do we go down, A or B?" With requirements we can do a lot of trades, but when you get into building and testing phases, that's when we've got to have the right infrastructure and the right decision process to be able to make timely decisions. They have to be the best we can do. Everyone is going to go through problems when you get into building and testing stuff, because that's when you really see the material. It's easy to make a PowerPoint® chart.¹ When you get into [building], you've got three or four contractors involved in that, and that challenges DCMA to continue to pull everyone together into one integrated team. As we continue to mature and evolve in a collaborative environment and DCMA stays involved, we'll work through those challenges and decisions to keep pushing forward.

Q: Is there is a particular DCMA team or project that has been recognized for providing superior customer care?

BGC: I'm proud of them all. No, I really am, because I can go to this DCMA missile specialist, or this DCMA team or this air specialist — I've got them all. [smiling] That's the difference on this one.



¹ Microsoft Powerpoint® is a registered trademark of Microsoft Corporation in the United States and/or other countries.

(Above Middle) The Future Combat Systems Class I Unmanned Aerial Vehicle. (Image courtesy of U.S. Army)

(Above Left) The Future Combat Systems (FCS) Small Unmanned Ground Vehicle. (Image courtesy of U.S. Army)